



Meeting Minutes Transmittal - Approved

Unit Managers Meeting
4843 ALKALI METAL STORAGE FACILITY
2440 STEVENS CENTER, RM 2200
Richland, Washington

Meeting Held February 18, 1994
From 11:00 am to 12:00 noon

The undersigned indicate by their signatures that these meeting minutes reflect the actual occurrences of the above dated Unit Managers Meeting.

Randall N. Krekel Date: 3-17-94
Randall N. Krekel, Unit Manager, RL

Not present. Date: _____
Daniel L. Duncan, RCRA Program Manager, EPA Region 10

Alisa D. Huckaby Date: 3-17-94
Alisa D. Huckaby, Unit Manager, Washington State Department of Ecology

4843 Alkali Metals Storage Facility, WHC Concurrence

Fred A. Ruck III Date: 3/17/94
Fred A. Ruck III, Contractor Representative, WHC

Not present. Date: _____
J. A. (Mickey) Seamans, Contractor Representative, WHC

Purpose: Discuss Permitting Process

Meeting Minutes are attached. The minutes are comprised of the following:

- Attachment 1 - Agenda
- Attachment 2 - Summary of Discussion and Commitments/Agreements
- Attachment 3 - Attendance List
- Attachment 4 - Action Items
- Attachment 5 - HANDOUT: LETTER, A. D. HUCKABY-ECOLOGY TO S. H. WISNESS-RL,
TRANSMITTAL OF 4843 ALKALI METAL STORAGE FACILITY (AMSF)
CLEANUP CONSIDERATIONS (S-4-1, M-20-14)

947206-22

Attachment 1

**Unit Managers Meeting
4843 ALKALI METAL STORAGE FACILITY
2440 STEVENS CENTER, RM 2200
Richland, Washington**

**Meeting Held February 18, 1994
From 11:00 am to 12:00 noon**

Agenda

1. Approval of Past UMM Minutes
2. Status Action Items
 - 7/14/93:1
 - 7/14/93:2
3. Status Closure Activities
 - Status of Ecology Review of NOD Comments
 - Concrete Analysis
4. New Business
 - None
5. Set Next Meeting Date

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Attachment 2

Unit Managers Meeting
4843 ALKALI METAL STORAGE FACILITY
2440 STEVENS CENTER, RM 2200
Richland, Washington

Meeting Held February 18, 1994
From 11:00 am to 12:00 noon

Summary of Discussion and Commitments/Agreements

1. Approval of Past UMM Minutes

The January 12, 1994 meeting minutes were reviewed and approved.

2. Status Action Items

- 7-14-93:1 Arrange for Ecology to attend radiation survey of 4843 AMSF

Pending. Awaiting removal of waste from 4843 AMSF and scheduling of the survey. An additional waste overpack container needs to be ordered and received before final waste shipments can occur. The survey is now expected to occur toward the 2nd quarter of 1994

- 7-14-93:2 Provide Ecology with copy of the radiation survey procedure

Pending. Radiation survey documents will be provided once the date of the survey is determined. Copies of the Health Physics Procedures (WHC-IP-0718) and the WHC Radiological Control Manual (WHC-CM-1-6) were provided to Ecology at the December 14, 1993 UMM.

3. Status Closure Activities

- Status of Ecology Review of NOD Comments

WHC (J. G. Adler) asked if Ecology had any questions on the NOD Response Table. Ecology (A. D. Huckaby) stated that there were none at this time. Ecology also stated that their review of the NOD Response Table will be completed by February 28, 1994.

- Concrete Analysis

Ecology (A. D. Huckaby) discussed the methodology and techniques for the analysis of inorganics, specifically sodium and lithium, in concrete with RL (R. N. Krekel), WHC (J. G. Adler, D. P. Butcher, and A. L. Prignano), and GSSC (J. K. Bartz). Subjects discussed include the potential sodium and lithium levels in concrete relative to the soil background, toxicological aspects of determining sodium levels in concrete, differences and details of analytical methods.

Significant points in the discussion were:

The site-wide soil background level for sodium is 1,390 ppm. Concrete can have sodium levels above that level. Ecology and RL/WHC agree

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that the site-wide soil sodium background may not be useful in determining clean closure.

Ecology and WHC/RL still do not agree on the analysis methodology for inorganics in concrete. This issue will need to be resolved at the DQO meetings (see Scheduling of DQO meeting).

The DQO may need to establish some type of health-based clean-up level for sodium. However, the methodology is not clear at this time.

The lithium clean-up levels are not expected to be a significant problem. The Hanford site-wide soil background value of 37 ppm for lithium may provide an adequate clean-up level.

4. New Business

- Scheduling of DQO meeting

WHC (J. G. Adler) asked if Ecology was ready to schedule a data quality objectives (DQO) meeting for March. Ecology (A. D. Huckaby) stated that Ecology would be ready. WHC takes an action (2-18-94:1) to arrange an DQO meeting.

5. Set Next Meeting Date

The next meeting has been set for March 17, 1994, for 10:00 am in Richland, Washington.

Unit Managers Meeting
4843 ALKALI METAL STORAGE FACILITY
2440 STEVENS CENTER, RM 2200
Richland, Washington

Meeting Held February 18, 1994
From 11:00 am to 12:00 noon

Attendance List

[illegible]

Attachment 4

Unit Managers Meeting
4843 ALKALI METAL STORAGE FACILITY
2440 STEVENS CENTER, RM 2200
Richland, Washington

Meeting Held February 18, 1994
From 11:00 am to 12:00 noon

Action Items

<u>Action Item #</u>		<u>Description</u>
07-14-93:1	OPEN	Arrange for Ecology to attend radiation survey of 4843 AMSF. (WHC: J. G. Adler)
07-14-93:2	OPEN	Provide Ecology with copy of the radiation survey procedure. (WHC: J. G. Adler)
02-18-94:1	NEW	Arrange and schedule the DQO meeting the 4843 AMSF. (WHC: J. G. Adler)

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Attachment 5

Unit Managers Meeting
4843 ALKALI METAL STORAGE FACILITY
2440 STEVENS CENTER, RM 2200
Richland, Washington

Meeting Held February 18, 1994
From 11:00 am to 12:00 noon

HANDOUT- LETTER, LETTER, A. D. HUCKABY-ECOLOGY TO S. H. WISNESS-RL,
TRANSMITTAL OF 4843 ALKALI METAL STORAGE FACILITY (AMSF) CLEANUP
CONSIDERATIONS (S-4-1, M-20-14)

22526



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

7601 W. Clearwater, Suite 102 • Kennewick, Washington 99336 • (509) 546-2990

February 16, 1994

Mr. Steven H. Wisness
U.S. Department of Energy
P.O. Box 550 MSIN: A5-15
Richland, WA 99352-0550

Dear Mr. Wisness:

Re: Transmittal of 4843 Alkali Metal Storage Facility (AMSF) Cleanup
Considerations (S-4-1, M-20-14)

I recently received a memorandum from Dick Boose of the Washington State Department of Ecology's (Ecology) Toxics Cleanup Program which discusses cleanup considerations relating to the above referenced unit. Prior to entering into the Data Quality Objectives (DQO) process and the revision of the 4843 AMSF Closure Plan, portions of the memorandum are enclosed in an effort to transmit information the Unit Manager intends to utilize as technical support during the decision making process related to the approval of the 4843 AMSF Closure Plan.

Currently, Ecology is drafting the response table in response to the U. S. Department of Energy's Notice of Deficiency Response Table dated October 14, 1993, submitted on November 4, 1993. It is anticipated that Ecology's response table will be finalized by February 28, 1994.

If you or your staff have any questions regarding the enclosure or this transmittal schedule, please call me at (509) 736-3034.

Sincerely,


Alisa D. Huckaby

Nuclear and Mixed Waste Management Program

AH:mf
Enclosure

cc: Randy Krekel, USDOE
Jason Adler, WHC
Fred Ruck, WHC

Dan Dunca, EPA
Doug Sherwood, EPA
Administrative Record

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9413206.1217

4843 Alkali Metal Storage Facility Unit
(Group # S-4-1, Milestone M-20-14)

The information provided below represents cleanup considerations relating to the above referenced unit received from Dick Boose, Dept. of Ecology, Toxics Cleanup Program via memorandum to Alisa Huckaby, Dept. of Ecology, Nuclear and Mixed Waste Management Program, dated February 10, 1994. The information provided below represents direct quotes taken from the above described memorandum.

Sodium

Elemental or metallic sodium must be stored in kerosene to prevent decomposition. In any unlikely scenario that metallic sodium would have "broken through" the storage containers one or more of the following sequences should have happened:

- Kerosene or a similar petroleum product spilling out would have left evident stains and other problems which would have required cleanup.
- What was the original state of the stored sodium? If a single solid then it would not likely have passed through the container lesion. Further, the air exposed sodium solid would probably self-ignite and combust in moist air.
- If the sodium in a granular or pellet form had passed through the 'container lesion' auto-ignition in a pool of kerosene would have been a likely consequence.
- If the sodium pellets had contacted water on the floor of the building or from other moisture sources, a strong exothermic reaction would have occurred. Hydrogen and sodium hydroxide (NaOH—a corrosive) would have formed. Assuming the hydrogen didn't auto-ignite, the wet sodium hydroxide should show visible evidences of corroding the concrete.
- Sodium hydroxide contaminated concrete should give a much higher Ph than unaffected concrete when pulverized and added to water.

Soil has substantial natural buffering capacity and I can't conceive NaOH contaminated concrete, if broken up and landfilled, being a serious problem. We are not looking at a systemic poison but a simple caustic substance. If it will help to alleviate concern and if the concrete floor is contaminated with NaOH you might suggest that the floor may be scrubbed with either citric acid or acetic acid. These are weak acids and biodegradable.

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Lithium

Lithium occurs in nature most often in insoluble mineral complexes with aluminum and silicon oxides. Quite possibly the 28-37 ppm natural background of lithium in the Benton-Franklin soil is in one or more insoluble mineral forms such as Spodumene, Lepidolite, Amblygonite, etc.

Lithium metal reacts exothermically with nitrogen in the presence of moisture at ordinary temperature. The reaction with water to form LiOH is slow in cold water but could occur on a damp concrete floor. Lithium hydroxide will draw CO out of the air to form the carbonate.

EPA "Proposed Criteria for Water Quality" October 1973, page 36, reports that the maximum acceptable concentration of lithium in water for continuous irrigation is 2.5 ppm except for citrus where 0.075 ppm is the maximum acceptable concentration.

I have not found an MCL for lithium in drinking water but many persons use lithium carbonate for therapy at doses of 1,000 mg and more a day (1994 PDR). I recommend that Ecology consider 2.5 ppm for lithium in drinking water and for continuous irrigation.

617-3206-219
9/13/94



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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Nuclear and Mixed Waste Management Program

AH:mf
Enclosure

cc: Randy Krekel, USDOE
Jason Adler, WHC
Fred Ruck, WHC

Dan Dunca, EPA
Doug Sherwood, EPA
Administrative Record

9413206.120

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(Group # S-4-1, Milestone M-20-14)

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Distribution:

J. G. Adler	WHC	H6-23
J. K. Bartz	GSSC	B1-42
R. C. Brunke	WHC	H6-23
R. M. Carosino	RL	A4-52
D. L. Duncan	EPA	HW-106 (Seattle)
O. A. Farabee	RL	N1-39
R. G. Hastings	RL	N1-39
A. D. Huckaby	Ecology	B5-18
R. N. Krekel	RL	A5-15
P. J. Mackey	WHC	B3-15
S. M. Price	WHC	H6-23
F. A. Ruck III	WHC	H6-23
J. A. Seamans	WHC	N2-04
J. L. Waite	WHC	B2-35
RCRA file/GHL	WHC	H6-23
Field File Custodian	WHC	H6-08

ADMINISTRATIVE RECORD: 4843 ALKALI METAL STORAGE FACILITY (S-4-1) [Care of EPIC, WHC (H6-08)]

Washington State Department of Ecology Nuclear and Mixed Waste, Hanford Files,
P.O. Box 47600, Olympia, Washington 98504-7600

Environmental Protection Agency Region 10, Seattle, Washington 98101,
Record Center, Mail Stop HW-074

Please send comments on distribution list to Kym D. Tarter (H6-23),
(509) 376-4701.